

STATE OF ARIZONA TELECOMMUNICATIONS ROADMAP

**The Government Information Technology Agency
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1.0 Overview

1.1 Introduction

In support of the privatization of telecommunication services mandated by 2003 Session Laws, Chapter 0263, HB2533, the Government Information Technology Agency (GITA) has developed this Statewide Telecommunications Roadmap (Roadmap) in consultation with the Arizona Department of Administration (ADOA), with support of its consultant The Burton Group and with input from many stakeholders.

The Roadmap is a high-level plan for reaching the State of Arizona's goal of a fully converged statewide voice, video and data network to service all state customers. It outlines foundational steps to a cost effective network that is consistent with industry trends and capable of meeting the State's current and future needs. The Roadmap describes the State's goals and recommended strategies but enables an outsourced vendor to identify the best approach to meet the State's needs. The start date for the Roadmap is July 1, 2004 which is the start of fiscal year '05 and anticipated to be after the award of the outsourced contract.

By anticipating the outsourcing of the State's telecommunication services, the State legislature has created a cornerstone for the Roadmap. The Roadmap contains business and technology-related milestones as well as a schedule to move state agencies to the outsourced environment. Based on considerable stakeholder feedback, all state agency voice and wide area network data services will be transitioned to the outsourced environment in the first two years. Through the RFP process and as agencies are transitioned to the outsourced environment, an analysis will be conducted to identify needed infrastructure changes, support and management requirements, and opportunities for cost savings (by the agency and the State as a whole).

The State also desires to move to a single converged voice and data network from separate networks within 3 to 5 years. In year 1, the State must determine the best strategy for obtaining convergence based on a detailed plan presented by the successful outsourced service provider (Service Provider).

The State is also interested in enabling movement to IP telephony for agencies who present a business case for this change. According to the Burton Group, less than 5% of large enterprises have moved to IP telephony for their entire organization. However, industry experts agree that movement to IP is the future direction of communications and is cost justified in particular cases now.

1.2 Background

A detailed description of the State's current systems may be obtained from the report to the Joint Legislative Budget Committee (JLBC) dated November 2002 (http://www.ats.state.az.us/JLBCrpt/Report_Menu.htm).

In summary, the State's voice and data infrastructures are entirely separate and, while there is some centralized voice management through the Arizona Telecommunications System (ATS) portion of ADOA, many agencies operate their own independent phone systems.

Through HB 2533, the State legislature has required GITA to deliver to the Joint Committee on Capital Review (JCCR) an actionable request for proposal (RFP) to privatize telecommunications services. The legislation identifies the following requirements for the RFP:

- Meet the communications requirements of state agencies and branch offices of state agencies regardless of location
- Leverage equipment already owned by the State
- Provide for a scalable, centralized, statewide voice, video and data converged solution pursuant to the State's target architecture
- Enable a statewide solution that will streamline state agency communications and enable other services such as N11 abbreviated dialing.

The resulting RFP (to which the Roadmap is an exhibit) calls for the outsourcing of the voice and data networks currently managed by ATS which provides services to 107 state agencies at over 267 locations throughout Arizona. It also requires the Service Provider to manage the fiber ring in the Phoenix capital mall area, the core network on the Tucson campus, the network infrastructure connecting Phoenix and Tucson, and other data lines throughout the State. In addition, the RFP calls for the outsourcing of the voice network operated by the Arizona Health Care Cost Containment System (AHCCCS). AHCCCS is located in downtown Phoenix, but not in the Capitol Mall area. The RFP also allows the State to add additional customers, locations, and services to continue to build a statewide converged network.

The Roadmap was developed in consultation with the Burton Group, an IT research and advisory firm headquartered in Salt Lake City, Utah. GITA and the Burton Group received written and verbal input on a draft version of the Roadmap from ADOA, the CIO Council, the Information Technology Authorization Committee, the Telecommunications Executive Governance Committee, and others. The Burton Group also conducted meetings and interviews with numerous individuals from state agencies, including GITA, ADOA, ATS and the State Procurement Office (SPO). The feedback received was used to refine and improve the Roadmap significantly.

2.0 Goals and Strategies

2.1 Goals

Management - The State's management goals for its telecommunication services are as follows:

1. Obtain cost-effective telecommunication services to control statewide expenditures
2. Meet current and future state customer business needs
3. Improve inter-agency communication
4. Provide better services to communicate with the citizens of Arizona
5. Support cross-agency initiatives (i.e., criminal justice integration, social services reform, 211)
6. Support rural development through availability of telecommunication services

Technology Related - The State's technology related goals are as follows:

1. Improve the quality of voice and data services
2. Centralize provision of telecommunication services to eliminate redundancy and reduce agency silos
3. Develop a statewide infrastructure that supports convergence of voice, video, and data to realize the benefits of convergence
4. Support movement to IP telephony as appropriate, based on business needs, to take advantage of new IP services and applications
5. Update statewide technical standards to enable seamless communication
6. Secure the State's networks to protect data and technology assets

2.2 Management Strategies

The following management strategies of outsourcing, centralization and fiscal prudence will enable the State to meet the goals outlined above:

1. Move to outsourced management
2. Select a highly qualified outsourcer
3. Manage resources to meet all state needs
4. Provide guaranteed service levels statewide
5. Leverage buying power and encourage rural build-out

These strategies are discussed in more detail below.

1. Move to outsourced management

An immediate goal of outsourcing is to obtain equal or better telecommunications services for State customers at equal or lower cost. All respondents to the RFP will be required to propose a rate structure (a) that will be based upon cost elements directly related to telecommunication services, and (b) that reflect rate reductions based on increases in the State's business. In addition, the Service Provider will be required to assist the State to identify and eliminate redundant circuits, networks and telephone systems. The State does not have centralized IT funding, so the outsourcer will have some overhead for decentralized billing and customer service. However, the State will be able to capitalize on the Service Provider's core competencies and the staff and resources it uses for all its clients. The State's need for personnel providing telecommunications related services will also be reduced by outsourcing. The Service Provider will be encouraged to propose benefit sharing, value-engineering proposals throughout the contract term to save the State additional money. In the long term, outsourced management and operation of the voice and data networks will provide the State with significant opportunities for cost savings.

2. Select a highly qualified outsourcer

The State plans to outsource services to a single contractor to enable the greatest realization of economies of scale. The Service Provider selected by the State must have extensive experience in modern voice and data networks for organizations of the size and complexity of the State. The Service Provider must be capable of meeting the State's current needs, as well as realizing the goals of the Roadmap. The selected company must not only implement the State's strategies as described in the Roadmap, it must propose and execute its own strategies, subject to State approval, to advance the State.

3. Manage resources to meet all state needs

Governor Napolitano issued a memorandum on September 24, 2003, requiring all agencies to participate in the statewide outsourced network. This participation is essential to realize the greatest cost savings and to improve interagency communication. The Roadmap contains a schedule for transitioning additional agencies to the outsourced environment.

Agencies will also be required to participate in advance of the Roadmap schedule, if they wish to acquire new or improved telecommunication services at an earlier date.

4. Provide guaranteed service levels statewide

The State is a conglomerate of different customers each with unique challenges. The outsourced Service Provider must be capable of servicing large agencies as well as small ones, remote sites as well as centralized ones and technically sophisticated as well as unsophisticated customers. Services to all customers must meet guaranteed service levels statewide. The outsourced provider must be able to effectively deal with each organizations' procedures, approval processes, security requirements, etc.

5. Leverage buying power and encourage rural build-out

In order to leverage the buying power of all state organizations (i.e., agencies, cities, counties, schools, etc.) the state will retain competition on telecommunication and related commodity contracts. (See *Addendum A*) As the State improves these contracts, it will realize additional benefits from them. The State will collaborate across state, county, local, educational and judicial lines to improve and increase utilization of these contracts to enable additional economies of scale.

As State offices in rural areas are transitioned into the statewide network, or upgraded to meet emerging technical standards, the State can combine these activities with a local community's own purchases (through the TOPAZ initiative) to encourage additional telecommunication services to rural communities at lower costs. In addition, rural political subdivisions can be transitioned into the statewide network at their option.

2.3 Technology Related Strategies

The State believes the following technology related strategies of streamlining, modernization and security will enable the State to meet its goals:

1. Develop a unified, statewide system
2. Move to a single, converged infrastructure
3. Ensure infrastructure strength, modernization, survivability and security
4. Update Enterprise Architecture (EA) and migrate to IP telephony (based on business needs)
5. Integrate call centers and help desk services

These technology related strategies are discussed in more detail below.

1. Develop a unified, statewide system

A key to the State's success is a standardization of disparate agency phone systems into a unified statewide system that meets the current and anticipated needs of all state customers. The State will thereby eliminate redundancy and take advantage of economies of scale. The State will leverage existing investments, where it makes business sense to do so.

The State is seeking a fully featured enterprise-class solution with support for all calling features used or to be used by State customers. In addition, the State is seeking support for cost saving applications such as voice and video teleconferencing and collaborative communications including unified messaging allowing integrated management of voice mail, e-mail, and other messaging services via a single interface.

2. Move to a single, converged infrastructure

The State seeks to migrate from a separate voice network and a separate data network to the provision of voice and data services over a single network within 3 to 5 years. This migration will allow the State to reduce its operating, management, and deployment costs. The State will leverage a service infrastructure among multiple customers, rather than building new infrastructures at multiple locations. The migration to a single converged network will require determination of phone system strategies, the extent of IP telephony usage, support for analog/digital telephone services and policies to enable data usage over the network.

The Service Provider must develop a convergence plan for the State that is feasible given the State's budgetary constraints. The plan must consider vastly different needs and abilities among state customers, application support and security requirements as well as network integration with wireless services and telecommuting initiatives. The Service Provider will be encouraged to propose funding alternatives, such as leasing, benefit sharing, etc., to enable the State to advance more quickly toward convergence.

3. Ensure infrastructure strength, modernization, survivability and security

The Service Provider must update the State's shared network infrastructure annually to ensure the infrastructure continues to support State business needs. The Service Provider will work with the State to design an infrastructure that minimizes single points of failure and has a robust and resilient design. The State shall employ redundancy where helpful to ensure business continuity but shall minimize excess redundancy. The State's network infrastructure must be capable of meeting service level requirements for all current and anticipated applications. Many voice and video applications, as well as transaction based applications require predictable end-to-end communication. Call quality must be high and transaction sessions must not experience excessive delays in server response.

The infrastructure must meet homeland security requirements for reliable and secure access. Related disaster recovery plans must be consistent with current data center survivability initiatives. Data privacy issues must also be considered.

4. Update Enterprise Architecture (EA) and migrate to IP telephony (based on business needs)

The State of Arizona's Enterprise Architecture (EA) defines target technologies for state agencies. (See http://gita.state.az.us/enterprise_architecture/ and http://gita.state.az.us/policies_standards/). The Service Provider must guide the State in changes and updates to the EA, as appropriate.

According to the Burton Group, less than 5% of large enterprises have moved to IP telephony for their entire organization. The State will take advantage of IP-based technology as business needs of state customers warrant its use, subject to resolution of security and quality of service concerns. The use of IP-based phone systems is consistent with industry trends, however, there is no “one-size-fits-all” approach to implementing IP telephony. The available solution set over the next several years is likely to include a variety of IP telephones, mobile phones, and soft-phones, as well as support for some existing users of digital and/or analog handsets. The State hopes to take advantage of related emerging applications and services to improve worker productivity and reduce costs to the State.

5. Integrate call centers and help desk services

The Service Provider will identify opportunities for shared resources, such as shared call center and help desk services, enabled by convergence of voice and data onto a single platform. Sharing these resources will allow the State to save money. Unified call center services can also support automatic call distribution to enable initiatives such as “211, 311 and 511” for accessing social services, governmental services and transportation information.

3.0 Management and Transition

A key to successful implementation of a statewide voice and data network is management, oversight and administration of the relationship with the outsourced provider. Activities in regard to oversight and management are described below.

3.1 Preparatory Activities

Service Provider - Each prospective vendor will propose a strategy for transitioning initial and subsequent customers to the outsourced environment. The strategy of the successful respondent to the RFP, once approved by the State, will guide these transitions.

The State - Preparatory tasks to be undertaken by the State are as follows:

- Establish contractual relationship with the Service Provider.
- Establish State oversight responsibility for Roadmap implementation, Service Provider performance, customer satisfaction assurance, “additional work” process, reporting, etc. A preliminary design, including the role of a State program office is included as *Addendum B*.
- Create a statewide policy for any rare exceptions to the required transition of state agencies to the outsourced environment.
- Renew all expiring related statewide contracts for commodities and carrier services, as deemed appropriate, for terms to be determined by the State Procurement Office.

- Develop a plan for potentially displaced state employees from all impacted agencies.
- Encourage the successful Service Provider to consider employing displaced personnel from impacted agencies.

3.2 First Year: Fiscal Year '05 (07/01/04 - 06/30/05)

Service Provider - In the first year, the following will be accomplished by the Service Provider, subject to State oversight:

- Manage transition of ATS customers to outsourced telecommunication services.
- Manage transition of Arizona Health Care Cost Containment System to outsourced telecommunication services.
- Transition the following additional agencies to outsourced telecommunication services:
 - Department of Transportation
 - Registrar of Contractors
 - Department of Water Resources
 - Department of Environmental Quality
 - Small agencies, boards and commissions on the Capitol Mall
 - IP telephony agencies (i.e., Commerce, School for the Deaf & Blind, etc.)
 - Other agencies who want new or improved telecommunication services.

The State - In the first year, the State will update the Roadmap based on the proposals accepted from the Service Provider.

3.3 Second Year: Fiscal Year '06 (07/01/05 – 06/30/06)

Service Provider - In the second year, the Service Provider will transition all additional state agencies to outsourced services, including:

- Department of Public Safety
- Department of Game and Fish
- Lottery
- Arizona Retirement System
- Non-ATS portions of ATS customer agencies (i.e., Department of Economic Security, Department of Corrections, Department of Juvenile Corrections)

The State – One year prior to expiration of the initial contract term, the State must determine whether to renew or re-bid the telecommunications outsourcing contract. This decision will be made by the State based on an assessment of the Service Provider based on factors including, customer satisfaction, service quality, proposed convergence plan, ability to address IP telephony requests, proposals for benefit sharing or value engineering, etc.

3.4 During the Contract Term

Service Provider - Throughout the contract term, the Service Provider will submit benefit sharing or value engineering proposals to the State.

The Service Provider will also endeavor to identify and meet the needs of other state customers, such as cities, counties, schools, etc.

The State - During the contract term, state agencies will continue to submit and receive approval of Project Investment Justifications (PIJs) for all IT projects, including telecommunication related projects.

The State will evaluate the statewide commodity and carrier services contracts annually, with input from the Service Provider, to determine appropriate renewal or replacement strategies to maximize State cost savings.

4.0 Technology Related Implementation

A precise technical implementation plan for the State can only be developed once the State receives, evaluates and approves a Roadmap implementation and convergence plan from the Service Provider. Technology related implementation activities are described in general terms in Sections 4.1 to 4.4 below. The State's goals and strategies should guide its future efforts.

4.1 Preparatory Activities

In their proposals to the State, the prospective service providers will submit a plan for implementing the Roadmap, including a high-level convergence plan and an IP address management strategy. The plan selected must address the State's goals and strategies as described herein and must be practical, cost effective and meet agency business needs.

4.2 First Year: Fiscal Year '05 (07/01/04 - 06/30/05)

Service Provider - In the first year, the Service Provider, subject to State oversight, will:

- Submit a detailed convergence plan, on or before 180 days after contract award, consistent with the high-level plan submitted with its RFP response.
- Determine user requirements for convergence, including currently utilized telephony features, call center requirements, and survivability requirements including support for "211, 311 and 511" initiatives.
- Develop transition strategy for agencies with existing IP Telephony implementations and develop a strategy for additional agencies requesting IP telephony implementations.

- Implement the IP address management strategy approved by the State.
- Develop strategies for:
 - acceptance of IP voice calls from outside state government
 - securing “back doors” to the state’s shared WAN network
 - supporting enhanced 911 (e911)
 - improving preventative security controls and disaster recovery.

The State - In the first year, the State, with input from the Service Provider, will:

- Review and update policies and procedures for regulatory control, such as law enforcement access to phone systems, emergency call prioritization, and public record access issues (as the State moves to convergence).
- Review the Service Provider’s proposed convergence plan with State stakeholders (i.e., Governor’s Office, Legislature, CIO Council, etc.).
- Approve, or work with the provider to modify and approve, the Service Provider’s convergence plan.
- Review and approve the proposed IP address management strategy.

4.3 Second Year: Fiscal Year ‘06 (07/01/05 – 06/30/06)

During the second year, the Service Provider will implement the portions of its convergence plan approved by the State as well as any new IP telephony implementations approved by the State.

4.4 During the Contract Term

Service Provider - During the contract term, the Service Provider (subject to State oversight) must:

- Provide recommendations to GITA in regard to updates to the Enterprise Architecture (EA) and review recommendations from the CIO Council’s IP technology task team.
- Continue to streamline the network to reduce costs and complexity, eliminate redundancies in support services and take advantage of economies of scale to reduce unit costs.
- Maintain and operate the State’s WAN network infrastructure.
- Review strategies and architectures to ensure continuity with industry technology trends.

- Implement any approved IP telephony implementations, as appropriate.
- Define strategies to meet the technical needs of other state customers, such as cities, counties, schools, etc.

The State - In addition to periodic updates to the Enterprise Architecture, the State must update, with input from the Service Provider, its disaster recovery planning to ensure compliance with homeland security requirements (such as statewide business continuity planning and statewide emergency response and recovery planning), survivability of state services and possible links to existing shared data infrastructure, server farms, storage facilities and computer systems for disaster recovery support.

5.0 Conclusion

The State is undertaking a significant change in the way it manages data and telecommunications. Yearly refinements of the Roadmap may be necessary based on legislative, budgetary, and other State considerations.

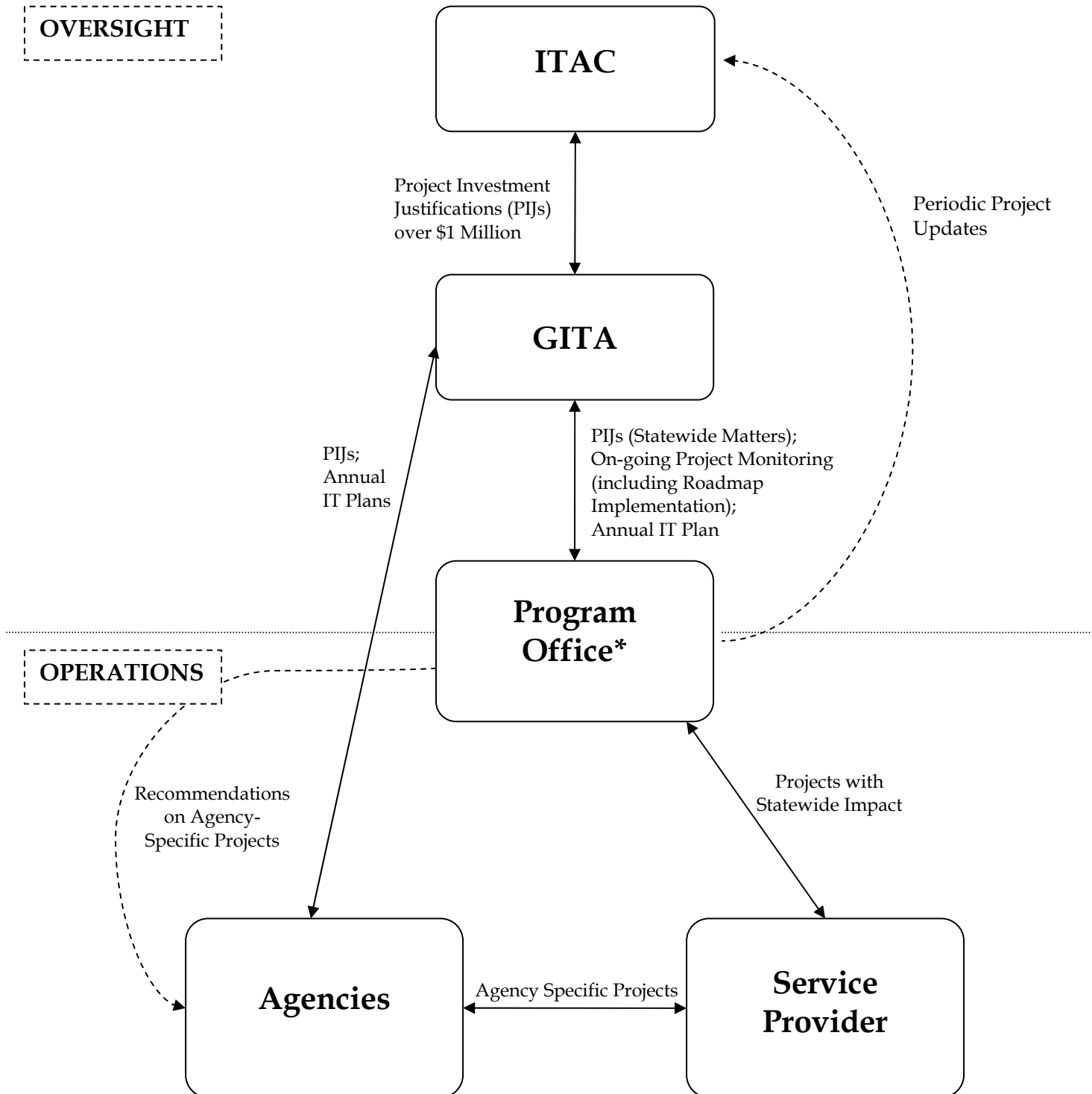
If the State is able to transition all state agencies to an outsourced environment in 2 years and implement convergence of the state's voice and data network in 3 to 5 years, the State will realize significant benefits for its operations, its relationships with other government organizations and its communication with citizens.

ADDENDUM A
Statewide Telecommunications & Related Contracts*

AD000170	Carrier Services
AD000033	Small Telephone Systems
AD000187	Local and Wide Area Network Equipment
AD020193	Cabling Communication Systems
AD000020	Public Safety Answering Positions
AD990120	Frequency Division Multiplexing Equipment
AD990044	Microwave Equipment and Accessories
AD010226	Internet Firewall & URL Filtering
AD010075	Cellular/PCS/Satellite Radiotelephones & Services
AD020020	Fixed Wireless Systems and Related Services
AD020018	Video & Audio Conferencing Products

* Maintenance and other agency specific contracts are not included in this list.

ADDENDUM B IT Project Oversight



* The Program Office will be in the Arizona Telecommunications System (ATS) portion of the Arizona Department of Administration (ADOA), as contemplated by the ATS statutes. [Note: Contract modifications and compliance are handled by the State Procurement Office (SPO), under delegation from the ADOA Director.]